

OCTOBER 2012

**P/ID 40322/PZLD**

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Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 50 words.

Define/Explain the following :

1. pH
2. Osmosis
3. Transamination
4. Proteolytic enzyme
5. Embden–Mayer Path way
6.  $\beta$  – oxidation
7. Di-sulphide bond
8. Hydrophobic
9. High energy phosphate group
10. Functions of G.M tube

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 250 words.

11. (a) Describe the biological role of Buffers.

Or

(b) Classify proteins with suitable examples.

12. (a) What are the factors affecting enzyme activity?

Or

(b) Describe the functions of carbohydrates.

13. (a) Describe, the Bio-energetics of ATP.

Or

(b) Describe the processes of oxidative deamination.

14. (a) Write a short note on biological oxidation.

Or

(b) Describe the first law of thermodynamics.

15. (a) Discuss the biophysical aspect of vision.

Or

- (b) Explain the delayed effects of radiation.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

16. (a) Discuss the blood – bicarbonate buffer system and its importance.

Or

- (b) Explain the regulation of enzyme activity.

17. (a) What are peptides and biological active Peptides and their functions.

Or

- (b) Discuss the various theories of biological oxidation.

18. (a) Explain the concept of free energy with Gibbs – Donnan equilibrium.

Or

- (b) Discuss the Biosynthesis of Triglycerides.

19. (a) How to measure the radio activity by liquid scintillation.

Or

(b) Write the principle and procedure of Autoradiography.

20. (a) Explain the biological aspects of muscle contraction.

Or

(b) What is meant by Bioluminescence, explain the mechanism of bioluminescence with examples.

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